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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/661,032	09/11/2003	Christophe Arbogast	57637/1185	6754

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EXAMINER

JONES, DAMERON LEVEST

ART UNIT	PAPER NUMBER
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1618

DATE MAILED: 05/20/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/661,032

Applicant(s)

ARBOGAST ET AL.

Examiner

D. L. Jones

Art Unit

1616

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 1 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-112 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☐ Claim(s) ____ is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☒ Claim(s) 1-112 are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. ____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date ____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: ____.

RESTRICTION INTO GROUPS

1. Restriction to one of the following inventions is required under 35 U.S.C. 121:

Group (1) Claims 1, 4-8, 10-23, 27-31, 35-55, and 67-78, drawn to compounds and uses thereof comprising SEQ ID No. 1, classified in class 424, subclass 1.69.

Group (2) Claims 1, 4-8, 11-23, 27-31, 35-55, and 67-78, drawn to compounds and uses thereof comprising SEQ ID No. 2, classified in class 424, subclass 1.69.

Group (3) Claims 1, 4-8, 10-23, 25, 27-31, 35-55, and 67-78, drawn to compounds and uses thereof comprising SEQ ID No. 4, classified in class 424, subclass 1.69.

Group (4) Claims 1, 4-8, 10-23, 25, 27-31, 35-55, and 67-78, drawn to compounds and uses thereof comprising SEQ ID No. 5, classified in class 424, subclass 1.69.

Group (5) Claims 1, 4-8, 10-23, 27-31, 35-55, and 67-78, drawn to compounds and uses thereof comprising SEQ ID No. 6, classified in class 424, subclass 1.69.

Group (6) Claims 1, 4-8, 10-23, 27-31, 35-55, and 67-78, drawn to compounds and uses thereof comprising SEQ ID No. 7, classified in class 424, subclass 1.69.

Art Unit: 1616

Group (7) Claims 1, 4-8, 10-24, 27-32, 35-55, and 67-78, drawn to compounds and uses thereof comprising SEQ ID No. 8, classified in class 424, subclass 1.69.

Group (8) Claims 1, 4-8, 10-24, 27-32, 35-55, and 67-78, drawn to compounds and uses thereof comprising SEQ ID No. 9, classified in class 424, subclass 1.69.

Group (9) Claims 1, 4-8, 10-23, 27-31, 35-55, and 67-78, drawn to compounds and uses thereof comprising SEQ ID No. 10, classified in class 424, subclass 1.69.

Group (10) Claims 1, 4-8, 10-24, 27-31, 35-55, and 67-78, drawn to compounds and uses thereof comprising SEQ ID No. 11, classified in class 424, subclass 1.69.

Group (11) Claims 1, 4-8, 10-24, 27-31, 35-55, and 67-78, drawn to compounds and uses thereof comprising SEQ ID No. 12, classified in class 424, subclass 1.69.

Group (12) Claims 1, 4-7, 9-23, 26-31, 34-55, and 67-78, drawn to compounds and uses thereof comprising SEQ ID No. 26, classified in class 424, subclass 1.69.

Group (13) Claims 1, 4-7, 9-23, 26-31, 34-55, and 67-78, drawn to compounds and uses thereof comprising SEQ ID No. 27, classified in class 424, subclass 1.69.

Group (14) Claims 1, 4-7, 9-23, 26-31, 34-55, and 67-78, drawn to compounds and uses thereof comprising SEQ ID No. 28, classified in class 424, subclass 1.69.

Art Unit: 1616

Group (15) Claims 1, 4-7, 9-23, 26-31, 34-55, and 67-78, drawn to compounds and uses thereof comprising SEQ ID No. 29, classified in class 424, subclass 1.69.

Group (16) Claims 1-7, 11-23, 27-31, 35-55, and 67-78, drawn to compounds/dimers/multimers/moieties/sequences and uses thereof not encompassed by Groups (1) – (15) above, classified in class 424, subclass 1.69.

Group (17) Claims 1, 3, 56, and 67-78, drawn to compounds and uses thereof comprising dimer D1, classified in class 424, subclass 1.69.

Group (18) Claims 1, 3, and 56-78, drawn to compounds and uses thereof comprising dimer D4, classified in class 424, subclass 1.69.

Group (19) Claims 1, 3, and 56-78, drawn to compounds and uses thereof comprising dimer D5, classified in class 424, subclass 1.69.

Group (20) Claims 1, 3, and 56-78, drawn to compounds and uses thereof comprising dimer D6, classified in class 424, subclass 1.69.

Group (21) Claims 1, 3, and 56-78, drawn to compounds and uses thereof comprising dimer D7, classified in class 424, subclass 1.69.

Group (22) Claims 1, 3, and 56-78, drawn to compounds and uses thereof comprising dimer D10, classified in class 424, subclass 1.69.

Group (23) Claims 1, 3, and 56-78, drawn to compounds and uses thereof comprising dimer D13, classified in class 424, subclass 1.69.

Group (24) Claims 1, 3, and 56-78, drawn to compounds and uses thereof comprising dimer D17, classified in class 424, subclass 1.69.

Group (25) Claims 1, 3, and 56-78, drawn to compounds and uses thereof comprising dimer D24, classified in class 424, subclass 1.69.

Group (26) Claims 1, 3, and 56-78, drawn to compounds and uses thereof comprising dimer D26, classified in class 424, subclass 1.69.

Group (27) Claims 1, 3, and 56-78, drawn to compounds and uses thereof comprising dimer D31, classified in class 424, subclass 1.69.

Group (28) Claims 1, 3, and 56-78, drawn to compounds and uses thereof comprising dimer D32, classified in class 424, subclass 1.69.

Group (29) Claims 1, 3, and 56-78, drawn to compounds and uses thereof comprising dimer D33, classified in class 424, subclass 1.69.

Group (30) Claims 79-93 and 95-105, drawn to a method of screening according to independent claim 79 wherein SEQ ID No. 1 is utilized, classified in class 424, subclass 9.2.

Group (31) Claims 79-93 and 95-105, drawn to a method of screening according to independent claim 79 wherein SEQ ID No. 2 is utilized, classified in class 424, subclass 9.2.

Group (32) Claims 79-93, 95-105, and 107, drawn to a method of screening according to independent claim 79 wherein SEQ ID No. 4 is utilized, classified in class 424, subclass 9.2.

Group (33) Claims 79-93, 95-105, and 107, drawn to a method of screening according to independent claim 79 wherein SEQ ID No. 5 is utilized, classified in class 424, subclass 9.2.

Group (34) Claims 79-93 and 95-105, drawn to a method of screening according to independent claim 79 wherein SEQ ID No. 6 is utilized, classified in class 424, subclass 9.2.

Group (35) Claims 79-93 and 95-105, drawn to a method of screening according to independent claim 79 wherein SEQ ID No. 7 is utilized, classified in class 424, subclass 9.2.

Group (36) Claims 79-93 and 95-106, drawn to a method of screening according to independent claim 79 wherein SEQ ID No. 8 is utilized, classified in class 424, subclass 9.2.

Group (37) Claims 79-93 and 95-106, drawn to a method of screening according to independent claim 79 wherein SEQ ID No. 9 is utilized, classified in class 424, subclass 9.2.

Group (38) Claims 79-93 and 95-105, drawn to a method of screening according to independent claim 79 wherein SEQ ID No. 10 is utilized, classified in class 424, subclass 9.2.

Group (39) Claims 79-93 and 95-106, drawn to a method of screening according to independent claim 79 wherein SEQ ID No. 11 is utilized, classified in class 424, subclass 9.2.

Group (40) Claims 79-93 and 95-106, drawn to a method of screening according to independent claim 79 wherein SEQ ID No. 12 is utilized, classified in class 424, subclass 9.2.

Group (41) Claims 79-92, 94-105, and 108, drawn to a method of screening according to independent claim 79 wherein SEQ ID No. 26 is utilized, classified in class 424, subclass 9.2.

Group (42) Claims 79-92, 95-105, and 108, drawn to a method of screening according to independent claim 79 wherein SEQ ID No. 27 is utilized, classified in class 424, subclass 9.2.

Group (43) Claims 79-92, 95-105, and 108, drawn to a method of screening according to independent claim 79 wherein SEQ ID No. 28 is utilized, classified in class 424, subclass 9.2.

Group (44) Claims 79-92, 95-105, and 108, drawn to a method of screening according to independent claim 79 wherein SEQ ID No. 29 is utilized, classified in class 424, subclass 9.2.

Group (45) Claims 79-92 and 95-105, drawn to a method of screening according to independent claim 79 wherein the compounds/dimers/multimers/moieties/sequences and uses thereof are not encompassed by Groups (30) – (44) above, classified in class 424, subclass 9.2.

Group (46) Claim 109, drawn to a method as set forth by independent claim 109 (a *cyclic* polypeptide), classified in class 424, subclass 1.69.

Group (47) Claim 110, drawn to a method as set forth by independent claim 110 (a polypeptide), classified in class 424, subclass 1.69.

Group (48) Claim 111, drawn to a method as set forth by independent claim 111 wherein the compound is D1, classified in class 424, subclass 1.69.

Group (49) Claim 111, drawn to a method as set forth by independent claim 111 wherein the compound is D4, classified in class 424, subclass 1.69.

Group (50) Claim 111, drawn to a method as set forth by independent claim 111 wherein the compound is D5, classified in class 424, subclass 1.69.

Group (51) Claim 111, drawn to a method as set forth by independent claim 111 wherein the compound is D9, classified in class 424, subclass 1.69.

Group (52) Claim 111, drawn to a method as set forth by independent claim 111 wherein the compound is D10, classified in class 424, subclass 1.69.

Group (53) Claim 111, drawn to a method as set forth by independent claim 111 wherein the compound is D11, classified in class 424, subclass 1.69.

Group (54) Claim 111, drawn to a method as set forth by independent claim 111 wherein the compound is D12, classified in class 424, subclass 1.69.

Group (55) Claim 111, drawn to a method as set forth by independent claim 111 wherein the compound is D13, classified in class 424, subclass 1.69.

Group (56) Claim 111, drawn to a method as set forth by independent claim 111 wherein the compound is D14, classified in class 424, subclass 1.69.

Group (57) Claim 111, drawn to a method as set forth by independent claim 111 wherein the compound is D15, classified in class 424, subclass 1.69.

Group (58) Claim 111, drawn to a method as set forth by independent claim 111 wherein the compound is D16, classified in class 424, subclass 1.69.

Group (59) Claim 111, drawn to a method as set forth by independent claim 111 wherein the compound is D17, classified in class 424, subclass 1.69.

Art Unit: 1616

Group (60) Claim 111, drawn to a method as set forth by independent claim 111 wherein the compound is D18, classified in class 424, subclass 1.69.

Group (61) Claim 111, drawn to a method as set forth by independent claim 111 wherein the compound is D19, classified in class 424, subclass 1.69.

Group (62) Claim 111, drawn to a method as set forth by independent claim 111 wherein the compound is D20, classified in class 424, subclass 1.69.

Group (63) Claim 111, drawn to a method as set forth by independent claim 111 wherein the compound is D21, classified in class 424, subclass 1.69.

Group (64) Claim 111, drawn to a method as set forth by independent claim 111 wherein the compound is D22, classified in class 424, subclass 1.69.

Group (65) Claim 111, drawn to a method as set forth by independent claim 111 wherein the compound is D23, classified in class 424, subclass 1.69.

Group (66) Claim 111, drawn to a method as set forth by independent claim 111 wherein the compound is D24, classified in class 424, subclass 1.69.

Group (67) Claim 111, drawn to a method as set forth by independent claim 111 wherein the compound is D25, classified in class 424, subclass 1.69.

Group (68) Claim 111, drawn to a method as set forth by independent claim 111 wherein the compound is D26, classified in class 424, subclass 1.69.

Group (69) Claim 111, drawn to a method as set forth by independent claim 111 wherein the compound is D27, classified in class 424, subclass 1.69.

Group (70) Claims 1, 3, 11-22, 27-31, 35-55, and 110, drawn to a compound comprising the dimer of claim 112, classified in class 424, subclass 1.69.

Art Unit: 1616

Group (71) Claims 1, 3, 11-22, 27-31, 35-55, and 57, drawn to a compound comprising the dimer of claim 57, classified in class 424, subclass 1.69.

Group (72) Claims 1, 3, 11-22, 27-31, 35-55, and 58, drawn to a compound comprising the dimer of claim 58, classified in class 424, subclass 1.69.

Group (73) Claims 1, 3, 11-22, 27-31, 35-55, and 59, drawn to a compound comprising the dimer of claim 59, classified in class 424, subclass 1.69.

Group (74) Claims 1, 3, 11-22, 27-31, 35-55, and 60, drawn to a compound comprising the dimer of claim 60, classified in class 424, subclass 1.69.

Group (75) Claims 1, 3, 11-22, 27-31, 35-55, and 61, drawn to a compound comprising the dimer of claim 61, classified in class 424, subclass 1.69.

Group (76) Claims 1, 3, 11-22, 27-31, 35-55, and 62, drawn to a compound comprising the dimer of claim 62, classified in class 424, subclass 1.69.

Group (77) Claims 1, 3, 11-22, 27-31, 35-55, and 63, drawn to a compound comprising the dimer of claim 63, classified in class 424, subclass 1.69.

Group (78) Claims 1, 3, 11-22, 27-31, 35-55, and 64, drawn to a compound comprising the dimer of claim 64, classified in class 424, subclass 1.69.

Group (79) Claims 1, 3, 11-22, 27-31, 35-55, and 65, drawn to a compound comprising the dimer of claim 65, classified in class 424, subclass 1.69.

Group (80) Claims 1, 3, 11-22, 27-31, 35-55, and 65, drawn to a compound comprising the dimer of claim 66, classified in class 424, subclass 1.69.

Group (81) Claims 1, 3, 11-22, 27-31, 35-55, and 65, drawn to a compound comprising the dimer of claim 67, classified in class 424, subclass 1.69.

Note: Claims appearing in more than one Group will only be examined to the extent that they read on the elected invention.

2. The inventions are distinct, each from the other because of the following reasons: Inventions (1)-(81) above are unrelated. Inventions are unrelated if it can be shown that they are not disclosed as capable of use together and they have different modes of operation, different functions, or different effects (MPEP § 806.04, MPEP § 808.01). In the instant case, the inventions are unrelated because the sequences/dimers/multimeric groups are distinguished over one another. As a result, prior art which anticipates or renders obvious one group of compounds would neither anticipate nor render obvious another group. Also, it should be noted that various methods are disclosed which have different modes of operation, different function, and/or different effects. The inventions include methods such as screening for heteromultimeric compounds, diagnostic imaging (i.e., magnetic resonance imaging, ultrasound imaging, optical imaging, sonoluminescence imaging, photoacoustic imaging), treating and angiogenesis disease, treating a disease associated with hyperproliferation, and methods of synthesizing a multimeric compounds, as well as a multitude of multivalent compounds. It should be noted that while some of the inventions classify in the same location, a separate search is necessary since the core sequences/dimers/multimeric groups are distinct from one another.

3. Because these inventions are distinct for the reasons given above and have acquired a separate status in the art because of their recognized divergent subject matter, restriction for examination purposes as indicated is proper.

ELECTION OF SPECIES

4. Claims 1-112 are generic to a plurality of disclosed patentably distinct species comprising multivalent compounds and methods of use thereof. Applicant is required under 35 U.S.C. 121 to elect a single disclosed species, even though this requirement is traversed.

Note: Applicant is respectfully requested to elect a single disclose species from within the elected group. If appropriate for the elected group, Applicant is respectfully requested to identify the multivalent compound; the target; the chelator; the radionuclide; the linker; the therapeutic agent; the dimer; the imaging agent; the imaging method; the disease being treated associated with angiogenesis; (i.e., claim 75); the disease being treated associated with hyperproliferation (i.e., claim 76); the disease being treated (i.e., see claim 78); the heteromultimeric compound; and/or the multimeric compound.

5. Should applicant traverse on the ground that the species are not patentably distinct, applicant should submit evidence or identify such evidence now of record showing the species to be obvious variants or clearly admit on the record that this is the case. In either instance, if the examiner finds one of the inventions unpatentable over

the prior art, the evidence or admission may be used in a rejection under 35 U.S.C. 103(a) of the other invention.

6. Due to the complexity of the restriction requirement, a telephone call was not made to request an oral election to the above restriction requirement.


7. Applicant is advised that the reply to this requirement to be complete must include an election of the invention to be examined even though the requirement is traversed (37 CFR 1.143).

8. Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to D. L. Jones whose telephone number is (571) 272-0617. The examiner can normally be reached on Mon.-Fri., 6:45 a.m. - 3:15 p.m..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gary Kunz can be reached on (571) 272-0887. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


D. L. Jones
Primary Examiner
Art Unit 1616

March 14, 2005